

#### WHAT IS CLAIMED IS:

1. A method for determining a first physicochemical property of at least two compounds relative to each other by using a second physicochemical property, wherein determination of said first property depends on a third, undetermined physicochemical property, and said first property depends on the composition of the respective compound, and wherein determination of said second property depends on said third property as well, but said second property does not depend on the composition of the respective compound, for each compound comprising the steps of:

- a) measuring a first value for said first property under certain conditions; and
- b) simultaneously measuring a second value for said second physicochemical property under said certain conditions; and
- c) determining said first property for each compound relative to the other compound(s) by using said first and second values.

2. The method of claim 1, wherein said third property is the concentration of each of said compounds.

3. The method of claim 2, wherein said first property is the affinity constant of binding to a first target.

4. The method of claim 3, wherein said first target is an antigen, and wherein said at least two compounds comprise the variable domains of different antibodies binding to said antigen.

5. The method of claim 3, wherein said second property is the affinity constant of binding to a second target.

6. The method of claim 5, wherein said second target is an antibody or functional fragment thereof with specificity for an antibody-binding site comprised in each of said at least two compounds.

7. The method according to claim 3, wherein said steps (a) and (b) are performed in parallel for multiple compounds, and wherein each compound is contained in one well or an other-wise defined area of a substrate.

8. The method according to claim 3, wherein said steps (a) and (b) are performed in parallel for multiple compounds, and wherein each compound is contained in one spot of a microarray.

9. The method of claim 1, wherein said second property is the affinity constant of binding to a second target.

10. The method of claim 9, wherein said second target is an antibody or functional fragment thereof with specificity for an antibody-binding site comprised in each of said at least two compounds.

11. The method according to claim 10, wherein said steps (a) and (b) are performed in parallel for multiple compounds, and wherein each compound is contained in one well or an other-wise defined area of a substrate.

12. The method according to claim 10, wherein said steps (a) and (b) are performed in parallel for multiple compounds, and wherein each compound is contained in one spot of a microarray.

13. The method according to claim 1, wherein said steps (a) and (b) are performed in parallel for multiple compounds, and wherein each compound is contained in one well or an other-wise defined area of a substrate.

14. The method according to claim 1, wherein said steps (a) and (b) are performed in parallel for multiple compounds, and wherein each compound is contained in one spot of a microarray.

15. The method of claim 1, wherein each of said at least two compounds is in solution.

16. The method of claim 15, wherein said steps (a) and (b) are being performed by simultaneously contacting said solution with said first and said second target, each target being immobilized on a solid phase, and wherein the amounts of compound binding to said first and second target are measured for each compound.

17. The method of claim 16, wherein said first and said second target are being immobilized to different subsets of microspheres.

18. The method of claim 17, wherein said different subsets are characterized by different fluorescence labels.

19. The method of claim 18, further comprising the step of identifying binding of a compound to said first or second subset of microspheres by binding of a fluorescence label to the compound.

20. The method of claim 1, wherein each of said at least two compounds is immobilized to the surface of a solid phase.

21. The method of claim 20, wherein said steps (a) and (b) are being performed by simultaneously contacting said immobilized compound with known amounts of said first and said second target in solution, and wherein the relative amounts of first and second target binding to said immobilized compound are measured.

22. The method of Claim 1, wherein said certain conditions are equilibrium.

23. A kit, comprising

a) a first carrier comprising a least two areas for retaining sample solutions;

b) a second carrier comprising, for each of said areas comprised in said first carrier, at least two positions suitable for the immobilization of at least a first and a second compound, wherein said second carrier and said first carrier can be brought in contact in a way which allows to simultaneously contact each of said solutions with at least said first and second compounds immobilized to said at least two positions, and wherein the amounts of material out of said sample solution binding to said first and second compounds can be measured for each said sample solution.

24. A kit, comprising

a) a first carrier comprising a least two areas for retaining sample solutions;

b) a second carrier comprising, for each of said areas comprised in said first carrier, at least two positions suitable for the immobilization of at least a first and a second target, wherein said second carrier and said first carrier can be brought in contact in a way which allows to simultaneously contact each of said solutions with at least said first and second target immobilized to said at least two positions, and wherein the amounts of material out of said sample solution binding to said first and second targets can be measured for each said sample solution.

25. A kit comprising a set of at least two different subsets of microspheres for performing the method of claim 1, the microspheres in each of said subsets thereof having

immobilized thereon a target for compounds to be ranked with respect to the first physicochemical property, the target s in different subsets being different, and preferably a set of at least two compounds, each being able to bind to a respective one of the at least two targets.

26. A kit for ranking antibodies with respect to their affinity to a target, comprising a set of at least two different subsets of microspheres, the microspheres in a first subset having immobilized thereon a capture molecule for antibodies, the microspheres in a second subset being pre-activated so that the target can be immobilized thereon.

27. The kit of claim 26 further comprising a detection antibody.

28. A method for ranking at least two compounds relative to each other with respect to their first affinity constant of binding to a first target, by using their second affinity constant of binding to a second target,

wherein determination of said first affinity constant depends on the concentration of each of said compounds, and said first affinity constant depends on the composition of the respective compound, and

wherein determination of said second affinity constant depends on said concentration as well, but said second affinity constant does not depend on the composition of the respective compound, for each compound comprising the steps of:

a) measuring a first value for said first affinity constant under equilibrium conditions; and

b) simultaneously measuring a second value for said second affinity constant under said equilibrium conditions;

c) and determining said first affinity constant for each compound relative to the other compound(s) by using said first and second values.

29. The method of claim 28, wherein said first target is an antigen, and wherein said at least two compounds comprise the variable domains of different antibodies binding to said antigen.

30. The method of claim 28, wherein said second target is an antibody or functional fragment thereof with specificity for an antibody-binding site comprised in each of said at least two compounds.

31. The method of claim 28, wherein said steps (a) and (b) are performed in parallel for multiple compounds, and wherein each compound is contained in one well or an otherwise defined area of a substrate.

32. The method of claim 28, wherein said steps (a) and (b) are performed in parallel for multiple compounds, and wherein each compound is contained in one spot of a microarray.

33. The method of claim 28, wherein each of said at least two compounds is in solution.

34. The method of claim 33, wherein said steps (a) and (b) are being performed by simultaneously contacting said solution with said first and said second target, each target being immobilized on a solid phase, and wherein the amounts of compound binding to said first and second target are measured for each compound.

35. The method of claim 34, wherein said first and said second target are being immobilized to different subsets of microspheres.

36. The method of claim 35, wherein said different subsets are characterized by different fluorescence labels.

37. The method of claim 36, further comprising the step of identifying binding of a compound to said first or second subset of microspheres by binding of a fluorescence label to the compound.

38. The method of claim 28, wherein each of said at least two compounds is immobilized to the surface of a solid phase.

39. The method of claim 38, wherein said steps (a) and (b) are being performed by simultaneously contacting said immobilized compound with known amounts of said first and said second target in solution, and wherein the relative amounts of first and second target binding to said immobilized compound are measured.